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| Math Department Assessment Criteria  In response to a piece of work at an appropriate level | | | | | | | |
|  |  | **Achievement level 1/2**  **Minimal level** | **Achievement level 3**  **Approaching the level** | **Achievement level 4**  **Satisfactory level** | **Achievement level 5**  **Good level** | **Achievement level 6**  **Very good level** | **Achievement level 7**  **Outstanding level** |
| **Criterion A:**  Level of Knowledge, Skills and Understanding | Demonstrating Understanding   1. How effectively did I demonstrate my understanding overall?   2. How well did I use mathematical tools? | 1. My work shows some facts.   2. I rarely used the basic tools. | 1. My work shows knowledge of relevant facts, but contains misunderstandings of some key concepts.   2. I sometimes used basic tools well | 1. My work shows an understanding of some key concepts. I connected some necessary facts and ideas.   2. I usually used standard tools accurately and effectively. | 1. My work demonstrates good understanding of many key concepts important to the task. I connected the necessary facts and ideas.   2. I used tools accurately. | 1. My work demonstrates broad understanding of most key concepts important to the task. I frequently connected important facts and ideas.  2. I used tools in a more advanced context | 1. My work clearly demonstrates a thorough and deep understanding of the key concepts and ideas important to the task. Facts and ideas were connected intelligently.  2. I recognized and took opportunities to use tools in a complex manner. |
| **Criterion B:**  **Language for Learning** | **Communication of Task**  1. How well did I piece together and structure the information?  2. How well did I use terms and **notation?** | 1. I made no attempt to communicate my solution. I provided no structure.  2. Use of terms and notation was minimal. | 1. I attempted to communicate my work, but did not always do so clearly and did not give much structure to the work. I did not explore or justify ideas.  2. I used terms and notation inconsistently. | 1. I communicated my work, including some evidence and with some structure. I did not generalize or justify solutions, and did not address scope or limitations in my work.  2. I mostly used recognized terms and notation. | 1. I communicated my work clearly with good evidence, using graphs, examples, tables. I showed a basic understanding of proof and of the idea of scope and limitations.  2. I used terms and notation correctly. | 1. I communicated my work clearly, with most ideas illustrated with convincing evidence and clear explanations. I showed a good sense of proof, and referred to the idea of scope and limitations well.  2.I used sophisticated terms and notation correctly. | 1. I communicated my work convincingly, presenting all ideas explicitly and precisely. I proved necessary mathematics, sometimes in a rigorous manner. I explored scope and limitations in an extended way.  2. I used terms and notation perfectly, including in complex situations. |
| **Criterion C:**  **Conceptual Learning** | **Formulating/ understanding the questions/ problem?**  1. How well did I choose appropriate skills and strategies to solve the problem?  **2.** How well did I apply my knowledge to unfamiliar situations and show evidence of reflection to reach the final solution? | 1. My work did not show any progression of steps, and did not choose strategies appropriately.  2. I demonstrated little knowledge and therefore was not able to reflect upon my work. | 1. My work was missing many steps, and computations did not all progress naturally. I found answers with difficulty, the techniques I used were not appropriate or were inefficient.  2. I rarely applied my knowledge in unfamiliar situations, and demonstrated little evidence of reflection in my work. | 1. My work showed a solution but lacked some structure and the progression was not clear. I chose some correct strategies but did not always use the necessary skills well.  2. I applied my knowledge in some simple unfamiliar situations. I showed some evidence of reflection. | 1. My work had structure and the progression could be followed. I mostly used the correct strategies to find the solutions, but at times included unnecessary steps.  2. I applied my knowledge in many unfamiliar situations. The majority of my work showed some evidence of reflection. | 1. My work was clearly structured and progressed well. I used efficient and relevant strategies.  2. I applied my knowledge in most unfamiliar situations, noting applications when relevant. The majority of my work demonstrated reflection. | 1. My work arrived at the solution with clear structure from start to finish. At each step in the problem I used the most efficient and relevant strategy, leading to an elegant solution.  2. I applied my knowledge in all possible unfamiliar situations, noting applications explicitly. I reflected on my work at length, with evidence of problem solving strategies. I considered error analysis. |